

What is claim d is:

1. A light emitting diode having, at least, an AlGaInP light emitting layer and a transparent electrode, wherein the transparent electrode is
5 made of a ZnO film doped with a group III element or a compound thereof.
2. The light emitting diode according to claim 1, wherein the group III element or a compound thereof is selected from Ga, Al, In and compounds thereof.
- 10 3. The light emitting diode according to claim 1, wherein the amount of the group III element or a compound thereof to be doped is 1 wt % to 10 wt % as relative to ZnO.
- 15 4. The light emitting diode according to claim 1, wherein the ZnO film is additionally doped with a transient element other than the group III element, or a compound thereof.
- 20 5. The light emitting diode according to claim 1, wherein the light emitting diode has a contact layer between the AlGaInP light emitting layer and the transparent electrode, and the contact layer is selected from a GaP film, an InGaP film and an $(\text{Al}_x\text{Ga}_{1-x})_y\text{In}_{1-y}\text{P}$ film of which the Al mixed crystal ratio (x) and the In mixed crystal ratio (1-y) are both 0.05 or less.
- 25 6. The light emitting diode according to claim 5, wherein the contact layer has a film thickness of 100 Å to 500 Å.

7. The light emitting diode according to claim 6, wherein the contact layer has a film thickness of 200 Å to 300 Å.

5 8. The light emitting diode according to claim 5, wherein the light emitting diode has a current blocking layer of the opposite conductive type that is laminated on a portion of the contact layer.

9. The light emitting diode according to claim 5, wherein the light
10 emitting diode has a metal electrode that makes Schottky contact with a portion of the contact layer.

10. The light emitting diode according to claim 5, wherein the light
emitting diode has the transparent electrode and the contact layer that
15 provide for reduction in the contact resistance between the transparent electrode and the contact layer by means of annealing.